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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of )  
 )  
Service Rules for the 746-764 and 776-794 )  
MHz Bands, and Revisions to Part 27 of the )  
Commission's Rules. )

WT Docket No. 99-168

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FEDERAL COMMUNICATIONS COMMISSION  
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To: The Commission

**COMMENTS OF APCO**

The Association of Public-Safety Communications Officials-International, Inc. ("APCO") hereby submits the following comments in response to the Commission's Notice of Proposed Rulemaking ("NPRM"), FCC 99-97 (released June 3, 1999), in the above-captioned proceeding.

APCO is the nation's oldest and largest public safety communications organization. Most of its 13,000 individual members are state or local government employees involved in the management, design, and operation of police, fire, emergency medical, local government, highway maintenance, forestry conservation, disaster relief, and other public safety communications systems. APCO is an FCC-certified frequency coordinator for public safety channels, including the new 700 MHz Public Safety Band.

The Commission is proposing rules in the NPRM for the assignment and use of 36 MHz of spectrum in the 746-764/776-794 MHz bands (TV channels 60, 61, 62, 65, 66, and 67). These bands are immediately adjacent to the 24 MHz allocated for public safety services at 764-776/794-806 MHz (TV channels 63, 64, 68, and 69), pursuant to

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the Balanced Budget Act of 1997. APCO's principal concern in this proceeding is to ensure that new services authorized in the 746-764/776-794 MHz "non-public safety" spectrum will not interfere with or otherwise limit future adjacent channel public safety operations. APCO also favors the Land Mobile Communications Council proposal that a portion of the 746-764/776-794 MHz "non-public safety" spectrum be allocated for private wireless communications, and suggests that such an allocation be in spectrum immediately adjacent to the 764-776/794-806 MHz public safety band. Finally, APCO will respond below to the Commission's inquiry in the NPRM regarding public safety participation in spectrum auctions.

**I. THE FCC MUST PREVENT INTERFERENCE TO FUTURE PUBLIC SAFETY OPERATIONS.**

The Commission has pointed with pride to its allocation of 24 MHz for public safety services in the 764-776/794-806 MHz band. It is indeed an important step towards meeting some of the spectrum requirements of this nation's police, fire, emergency medical, and other public safety radio services. However, the potential benefits of the public safety allocation could be lost forever unless the Commission takes necessary action in this proceeding to prevent adjacent channel interference from other users of the 746-794 MHz bands.

Congress recognized the importance of protecting 700 MHz public safety operations when it adopted Section 337(d) of the Communications Act, which requires that in "establishing service rules with respect to licenses granted pursuant to this section, the Commission ... shall establish rules insuring that public safety services licensees using spectrum reallocated pursuant to subsection (a)(1) shall not be subject to harmful

interference from television broadcast licensees.”<sup>1</sup> The legislative history of this provision also indicates a strong Congressional expectation that “*the Commission will ensure that public safety service licensees continue to operate free of interference from any new commercial licensees.*”<sup>2</sup>

Honoring this Congressional intent requires strong, well-defined interference guidelines. In particular, the Commission must not allow any new television broadcast operations on frequencies immediately adjacent to the public safety allocation (*i.e.*, Channels 62, 65, and 67). Such high power, wide-area operations would severely limit adjacent channel public safety operations over large geographic areas. This would likely include large, densely populated metropolitan areas which have the most substantial requirements for new public safety spectrum. For example, if Channel 62 were to be utilized for a new television broadcasting facility in New York (transmitting from atop the World Trade Center), an estimated 50% of the newly allocated public safety spectrum would be rendered unusable over an area with a population of over 10 million.

The Commission must also limit the types and nature of non-broadcast commercial mobile radio operations on adjacent channels and/or provide a sufficient guard band within the commercial spectrum to prevent interference with public safety systems. Adjacent channel systems must be “compatible,” with similar ERP, antenna location, and adjacent channel coupled power. Particular attention must be given to the

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<sup>1</sup> 47 U.S.C. § 337(d).

<sup>2</sup> Balanced Budget Act of 1997, Conference Report to Accompany H.R. 2015, 105<sup>th</sup> Cong., 1<sup>st</sup> Sess., Report 105-217 (July 30, 1997), at 580 (emphasis added).

impact of digital systems operating with continuous carriers.<sup>3</sup> While APCO is not prepared at this time to recommend specific interference guidelines, it does refer the Commission to a related technical proposal submitted by Motorola in WT Docket 96-86.<sup>4</sup>

APCO also recommends that the Commission seek guidance on this matter from the Public Safety National Coordination Committee (“NCC”), a Commission-established federal advisory committee regarding the 700 MHz Public Safety Band. The NCC’s Technical Subcommittee has substantial expertise on these matters, and could provide the Commission with detailed technical recommendations regarding appropriate interference protections.

An essential element of the Commission’s interference guidelines must be the protection of future public safety adjacent channel operations. The rules must be based on the assumption that the immediately adjacent public safety spectrum is fully occupied and operated at maximum power and antenna heights from a virtually co-located site. Simply protecting then-existing adjacent channel public safety systems would be grossly inadequate, and would prevent future public safety operations on spectrum allocated pursuant to a Congressional mandate. The interference rules must be based on the recognition that the commercial portion of the band may be used well before the public safety portion in some areas of the country. Indeed, in many areas, commercial systems are likely to be the “first in” because current broadcast stations may block the public

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<sup>3</sup> For example, interference problems have recently occurred between Nextel’s new digital commercial mobile radio system and existing analog public safety systems operating on adjacent channels in the 806 MHz band.

<sup>4</sup> See *Comments of Motorola to the Second NPRM in WT Docket 96-86*, Appendix at 24-28 (filed December 22, 1997).

safety allocations, but not the commercial allocations. Commercial users are also able to move quickly in implementing new communications systems, whereas public safety users must overcome inherent funding, planning, and administrative delays.<sup>5</sup> These factors regarding the implementation of the 700 MHz bands must not be allowed to block future public safety operations.

## **II. THE COMMISSION SHOULD ALLOCATE SPECTRUM FOR PRIVATE WIRELESS SYSTEMS IN THE 746-764/776-794 MHz BAND.**

The Land Mobile Communications Council (LMCC), of which APCO is a member, has submitted a proposal that a portion of the 746-764/776-794 MHz band be allocated for private wireless services. APCO strongly supports the LMCC proposal for the following reasons. First, private wireless systems are less likely than commercial wireless systems to cause adjacent channel interference to public safety systems. Unlike commercial systems that seek the widest possible area of coverage, most private wireless systems are designed to cover only discrete geographic areas and users. That should significantly reduce the potential for adjacent channel interference problems. Second, public safety and private wireless systems often operate on the same or similar types of radio equipment. Thus, by allocating 700 MHz spectrum for private wireless users, the Commission could facilitate a larger private wireless/public safety equipment market for the band, leading to lower prices and a broader selection of equipment from a wider variety of vendors.

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<sup>5</sup> These different needs of public safety users have long been accepted and recognized by the Commission through its “extended implementation” rules. 47 C.F.R. §§ 90.155(b) and 90.629.

If spectrum is allocated for private wireless services in the 746-794 MHz bands, it should be immediately adjacent to the public safety bands to provide interference protection and broader economies of scale, as discussed above. For example, if a total of 12 MHz were to be allocated for private wireless services, it should be in two sets of paired frequencies at 746-749/776-779 MHz and 761-764/791-794 MHz. This plan would also preserve the 30 MHz split for transmit/receive frequencies that the Commission wisely followed in the public safety allocation.

### **III. PUBLIC SAFETY USERS SHOULD NOT BE EXCLUDED FROM SPECTRUM AUCTIONS.**

The Commission seeks comment as to whether “public safety entities” should be permitted to participate in auctions for 746-765/776-794 MHz spectrum. To the extent that this refers to state and local government public safety entities, it is probably an academic question since very few would have the statutory authority, financial resources, or administrative capability necessary to succeed in the rapid fire spectrum auction environment.<sup>6</sup> Nevertheless, there is no rational reason to prevent a public safety entity from participating in an auction if it can overcome those obstacles. APCO suggests, however, that state or local governments seeking spectrum in an auction for public safety communications be given “auction credits,” similar to the advantages afforded “small businesses” under the Commission’s general auction guidelines. Small businesses and

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<sup>6</sup> The “public safety” auction exemption in Section 309(j)(2)(A) is much broader than the definitions of public safety adopted by Congress in Section 337(f) and by the Commission in Part 90 for purposes of determining eligibility to operate in public safety spectrum (which, with a few exceptions, is limited to state and local governments). Thus, some of the entities exempt from auction under Section 309(j)(2)(A) may be nongovernmental entities that, notwithstanding the exemption, may have the financial and organizational capability to participate in an auction.

state and local governments are at a similar disadvantage in an auction *vis a vis* large commercial communications companies.

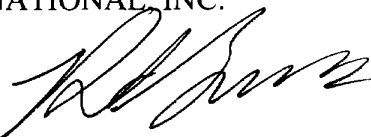
### CONCLUSION

For the reasons discussed above, the Commission must adopt rules to protect and promote public safety operations in the 700 MHz band.

Respectfully submitted,

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COMMUNICATIONS OFFICIALS-  
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